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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/769,879	01/24/2001	Ma-Chi Chen		5488

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Cupertino, CA 95014

EXAMINER

SLACK, NAKO N

ART UNIT	PAPER NUMBER
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3635

DATE MAILED: 01/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/769,879

Applicant(s)

CHEN, MA-CHI

Examiner

Naoko Slack

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on December 2, 2002 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Applicant's amendment received October 30, 2002 has been entered. Drawing and claim corrections have been approved and entered.

Response to Remarks

While Applicant argues that the structural components of the invention perform in a way that is unique, the claimed structural features of the invention do not differentiate from the structural features of the prior art. Specifically, Applicant's claimed structural features include a multi-story building with tension-only braces arranged in a V-shape, a plurality of beams, a plurality of columns, and jointing means. Applicant also states a "whereby" clause describing the intended behavior of the structural components. This behavior is not a structural feature that further limits the claim. It can be assumed that if the structural features of the braced multi-story building are met, the building will behave in the manner set forth in the whereby clause.

Furthermore, Applicant cites prior art to NEHRP as an admission that V-shaped bracing is well known in the art, and that conventional systems use the V-shaped bracing under tension and compression (first paragraph of Applicant's remarks, lines 9-13). Therefore, the claims have been rejected in view of prior art to NEHRP article as cited in Applicant's remarks.

Claim Objections

Claim 1 is objected to because of the following informalities: In claim 1, line 7, "beam" should be -- beams --. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the jointing process" in line 8. There is insufficient antecedent basis for this limitation in the claim. Claim 1(d) states "a means for jointing", "a means" being interpreted as a structural element. A jointing method or process has not been claimed and therefore, "the jointing process" lacks antecedent basis.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by article "Procedure and Commentary for Braced Frames", NEHRP Handbook, 1992 (hereinafter referred to as NEHRP).

Claim 1:

NEHRP discloses earthquake resistant multi-story buildings utilizing gravity potential energy to absorb earthquake energy, comprising:

- (a) a plurality of tension-only braces (Figures 6.0 and 6.1),
- (b) a plurality of beams with substantial gravity load,
- (c) a plurality of columns, and
- (d) means for jointing the low end of a pair of said braces arranged in a v-shape (central building, Figure 6.1) to the center of one of said beam, and the two upper ends to said columns at each end of said beam, respectively, and repeating the jointing process at predetermined locations.

Claim 1(e) states a "whereby" clause, describing the desired behavior of the bracing in response to earthquake forces. The whereby clause does not further limit the structural features of the building but states an intended behavior of the building subject to a lateral load. It need only be shown that the structure is capable of performing as described. Clearly, the V-braced building is capable of withstanding lateral earthquake loads, as the braced frames are specifically designed to resist lateral forces (page 1, section 6.0, line 1).

Claim 2:

NEHRP's tension-only brace may be made of very light, tension-only rod bracing (page 1, section 6.1, line 6).

Claim 3:

The building may be constructed of steel or of reinforced concrete (page 1, section 6.1, lines 9-13).

Claim 4:

The joint location of brace to the beam may be at any point within the span of said beam, preferably at concentrated load to be most efficient. NEHRP illustrates the joint of brace to beam to be centrally located (Figure 6.1).

Claim 5:

A method of utilizing gravity potential energy to absorb earthquake energy for a multi-story building with columns and beams, comprising the steps of :

(a) installing a pair of v-shaped tension-only braces with lower end at center of said beam and upper ends to said columns at the two ends of said beam (NEHRP, Figure 6.1)

(b) repeating the jointing process at all predetermined locations of said building (multiple levels as illustrated in Figure 6.1),

Claim 5(c) states a "whereby" clause, describing the desired behavior of the bracing in response to earthquake forces. The whereby clause does not further limit the method with specific steps to construct the building but states an intended behavior of the building subject to a lateral load. It need only be shown that the structure is capable of performing as described. Clearly, the V-braced building is capable of withstanding

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lateral earthquake loads, as the braced frames are specifically designed to resist lateral forces (page 1, section 6.0, line 1). The gravity potential energy is stored in the weight of the beams and produces tension in the braces, as lower ends of the braces are attached to the central portion of the beams.

Claim 6:

NEHRP discloses a wind resistant multi-story building utilizing gravity load to resist wind load, comprising:

- (a) a plurality of v-shaped tension-only braces (Figure 6.1)
- (b) a plurality of beams with substantial gravity load,
- (c) a plurality of columns, and
- (d) means for jointing said braces to said beams and columns at predetermined locations,

Claim 1(e) states a “whereby” clause, describing the desired behavior of the bracing in response to lateral wind loads. The whereby clause does not further limit the structural features of the building but states an intended behavior of the building subject to a lateral load. It need only be shown that the structure is capable of performing as described. Clearly, the V-braced building is capable of withstanding lateral wind loads, as the braced frames are specifically designed to resist lateral forces (page 1, section 6.0, line 1).

Prior Art of Record

The article "Design of Tension-Only Concentrically Braced Steel Frames for Seismic Induced Impact Loading", Elsevier Science Ltd, 1998 discloses that the tension-only concentrically braced frames are commonly used in low-rise steel buildings, as the design is inexpensive, simple to design, fabricate and erect (page 1087, column 1, paragraph 2).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naoko Slack whose telephone number is (703) 305-0315. The examiner can normally be reached on Mon-Fri (6:00 am-2:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl D. Friedman can be reached on (703) 308-0839. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Naoko Slack
Primary Examiner
Art Unit 3635

NS
January 24, 2005